

Lessons Learned from Green Power Marketing Abroad

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<http://www.iwoe.unisg.ch>

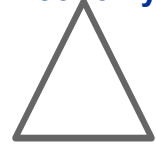
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Outline

- **SAM at a glance**
- **Sustainable Energy: A View from Europe**
- **Green Power Marketing: Activity and Lessons learned**
- **Conclusions**

SAM Sustainable Asset Management

Economy



Environment Society

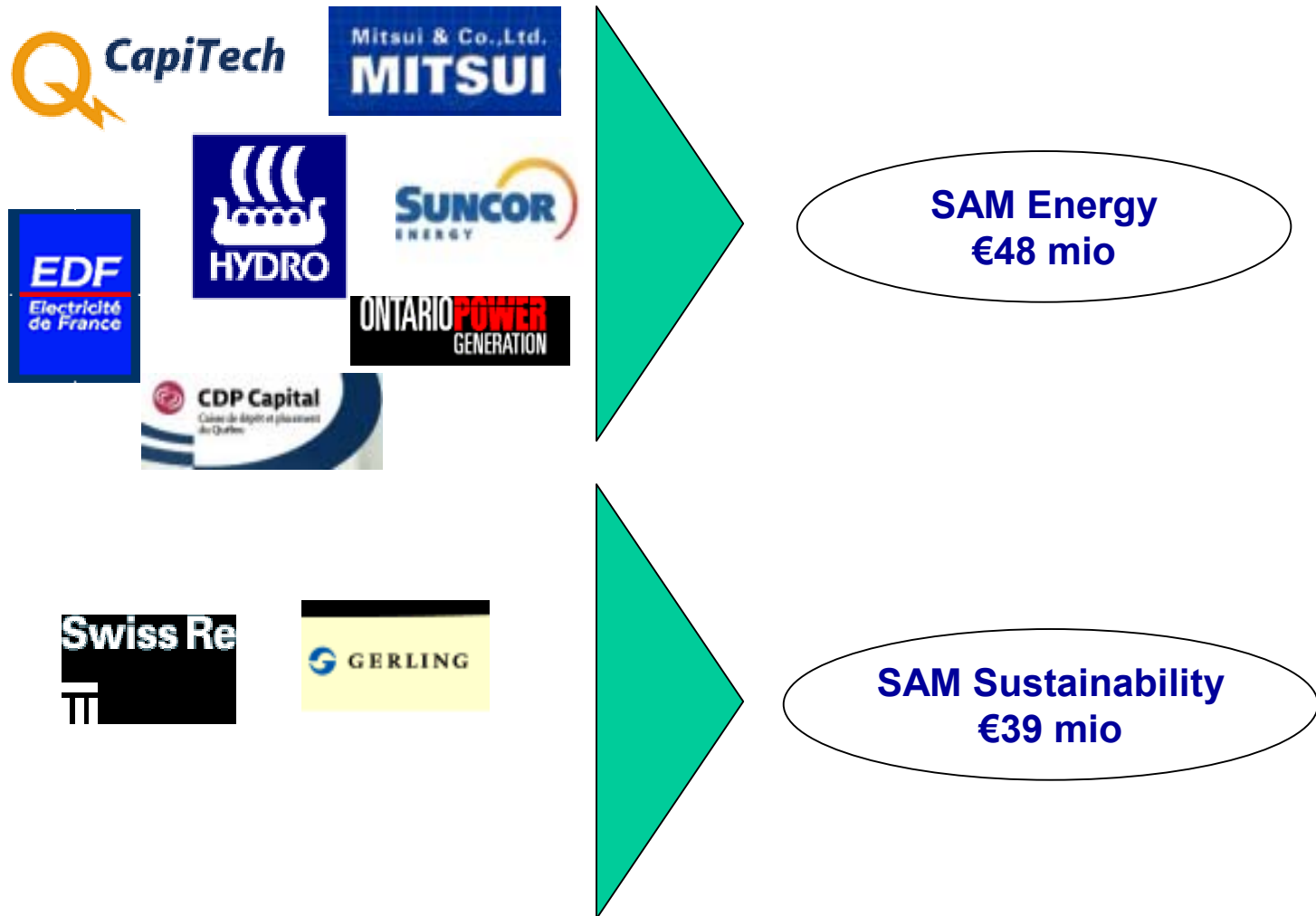
- Independent asset management company, focused exclusively on sustainability investments
- Investment funds, investment companies, mandates, private equity
- World's first global sustainability index with one of the world's largest Sustainability Research Teams



SAM Equity Partners Ltd. :

- Founded in 2000, manages:
 - » SAM Private Equity Energy Fund LP
 - » SAM Sustainability Private Equity LP
- 80% energy, 20% Resource Productivity/Healthy Nutrition

SAM Private Equity: Strong international investor base



SAM Private Equity: Six Energy Investments to date

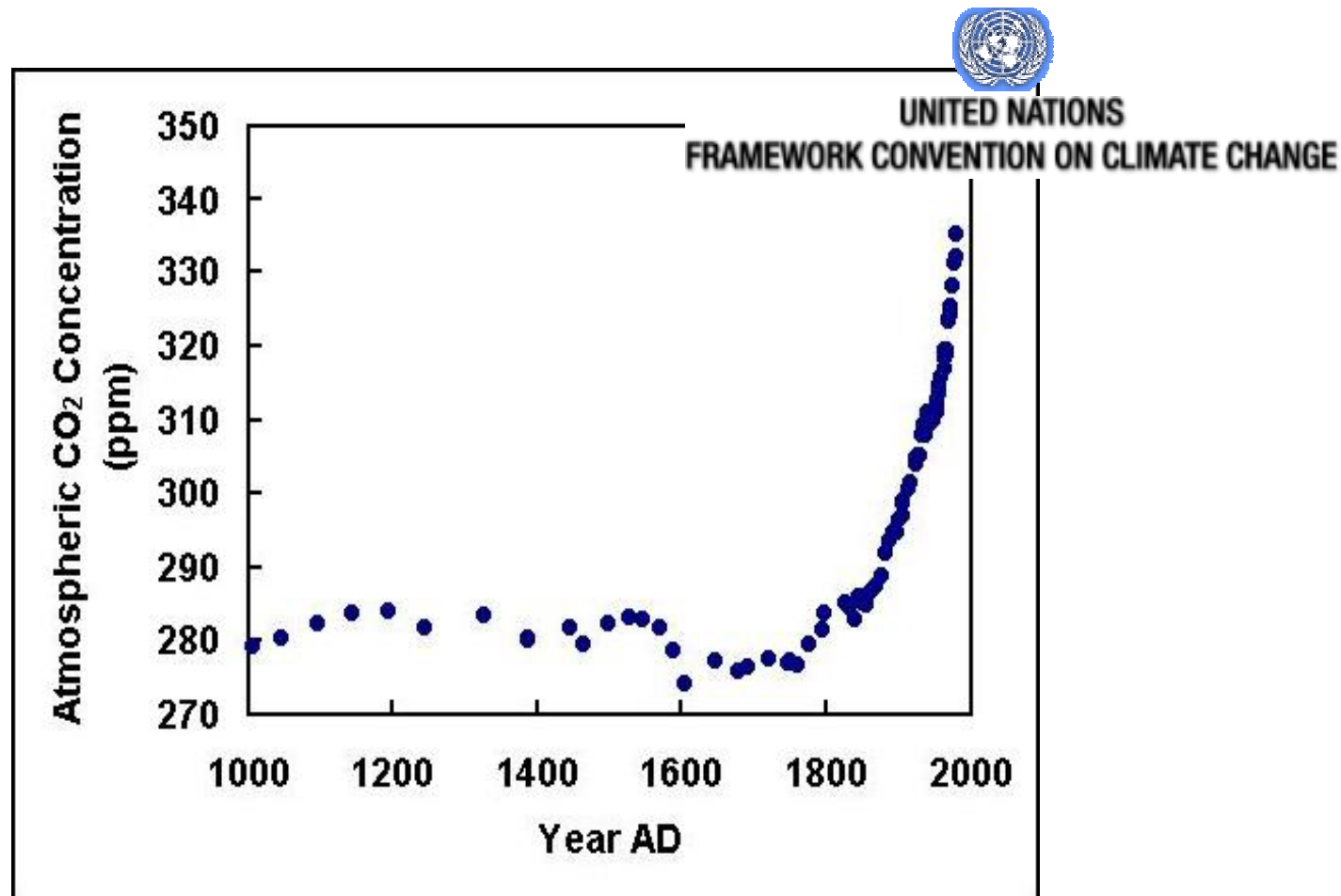


- Massachusetts-based **photovoltaic cell** manufacturer, SAM invested in late stage round in January 2000. IPO November 2000.
- A Boston-based start-up company with a novel approach to **Solid Oxide Fuel Cells**, SAM invested in February 2001.
- German early stage company focusing on **Zinc Oxide Fuel Cells** for vehicle applications, SAM invested in July 2001.
- New Jersey-based US start-up company developing **Direct Methanol Fuel Cells** for consumer electronics. SAM invested in August 2001.
- UK **offshore-wave power** company, based in Edinburgh, SAM invested in an early stage round March 2002.
- Australian **onshore-wave power** company, SAM invested in an early stage round in May 2002.

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The Longer Term Perspective: Climate Change as the Greatest Environmental Challenge yet



Climate Change – from Challenged Science to Real Challenges



The good news...

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World

Russia may ratify Kyoto this year
By Reuters - 03 Sep 2002 10:31 BST

REUTERS


Earth Summit 2002

Russian Prime Minister Mikhail Kasyanov says Moscow may ratify the Kyoto Protocol this year, a move that would virtually assure the implementation of the treaty on cutting greenhouse gases.

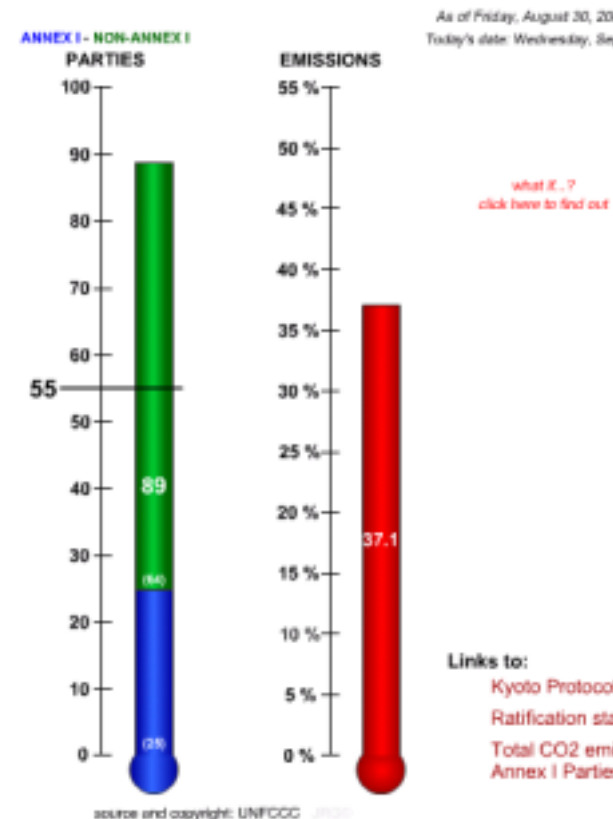
Shortly after a speech to the Earth Summit on Tuesday in which he said the Russian government considered the accord would be ratified "in the very nearest future", Reuters asked him whether he expected the ratification to take place this year.

"Maybe this year," he replied, before declining further comment.

European Union nations in particular are pressing Russia to have its parliament to

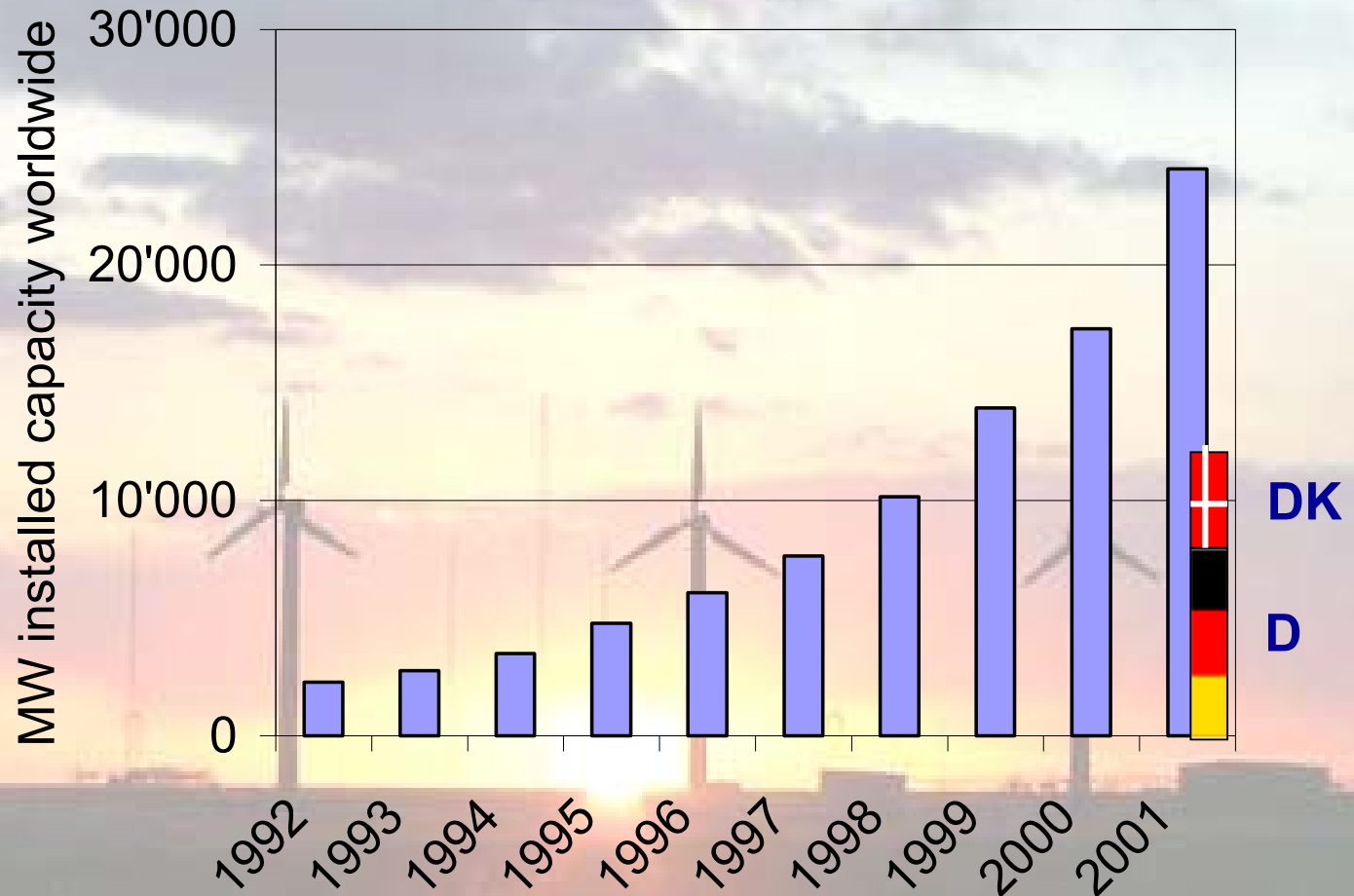
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KYOTO PROTOCOL THERMOMETER



Wind Energy: From Niche to Mass Market

Global Wind Energy Capacity: Strong Growth fueled by Government Incentives



Source: BTM Consult

Micro CHP: A revolution in the basement

Emerging opportunities for fuel cells, stirling engines, etc.



Dietmar Kuhnt, CEO of RWE:

- „In den nächsten 15 Jahren wird der **Anteil dezentraler Energieerzeugung durch Wind, Sonne, Biomasse** und andere Technologien auf **über 30%** steigen...“
- „**Bis 2015** wollen wir in Deutschland **zehn Prozent** der Stromversorgung mit **Brennstoffzellen** bestreiten...“

Summarizing Trends & Driving Forces

The case for green power is stronger than ever before...

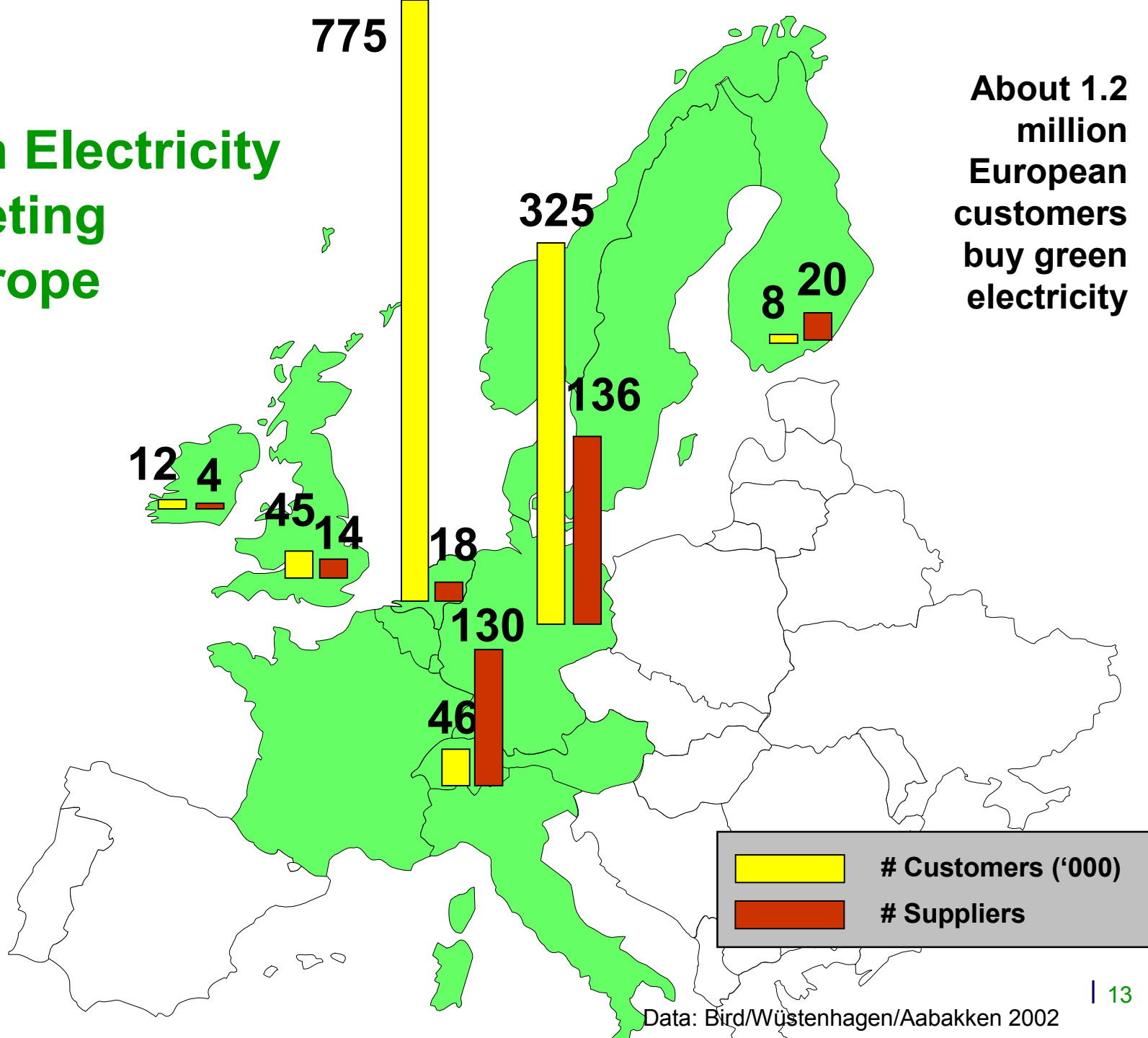
...how is that reflected in Green Power Marketing Activity?

Outline

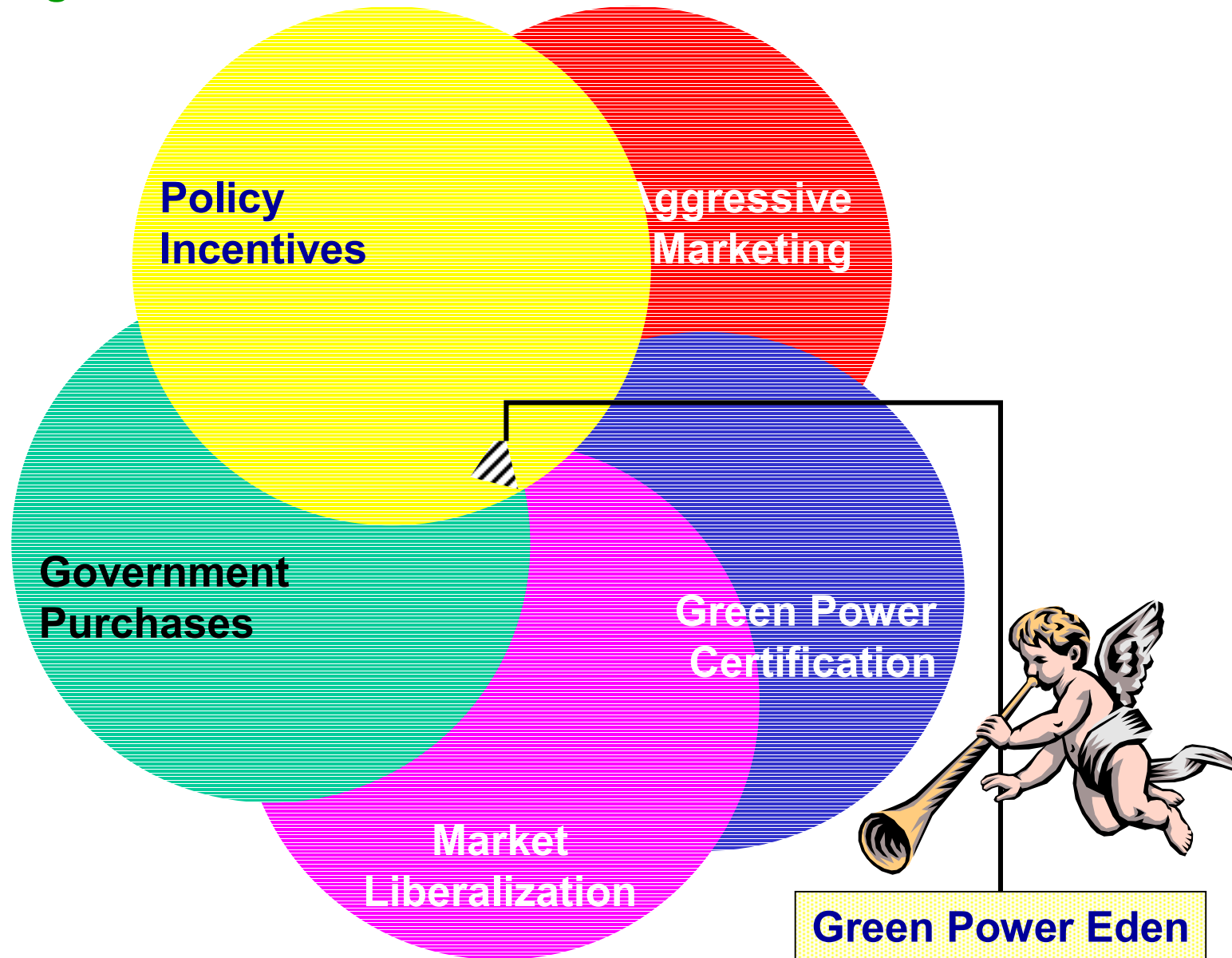
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Green Electricity Marketing in Europe

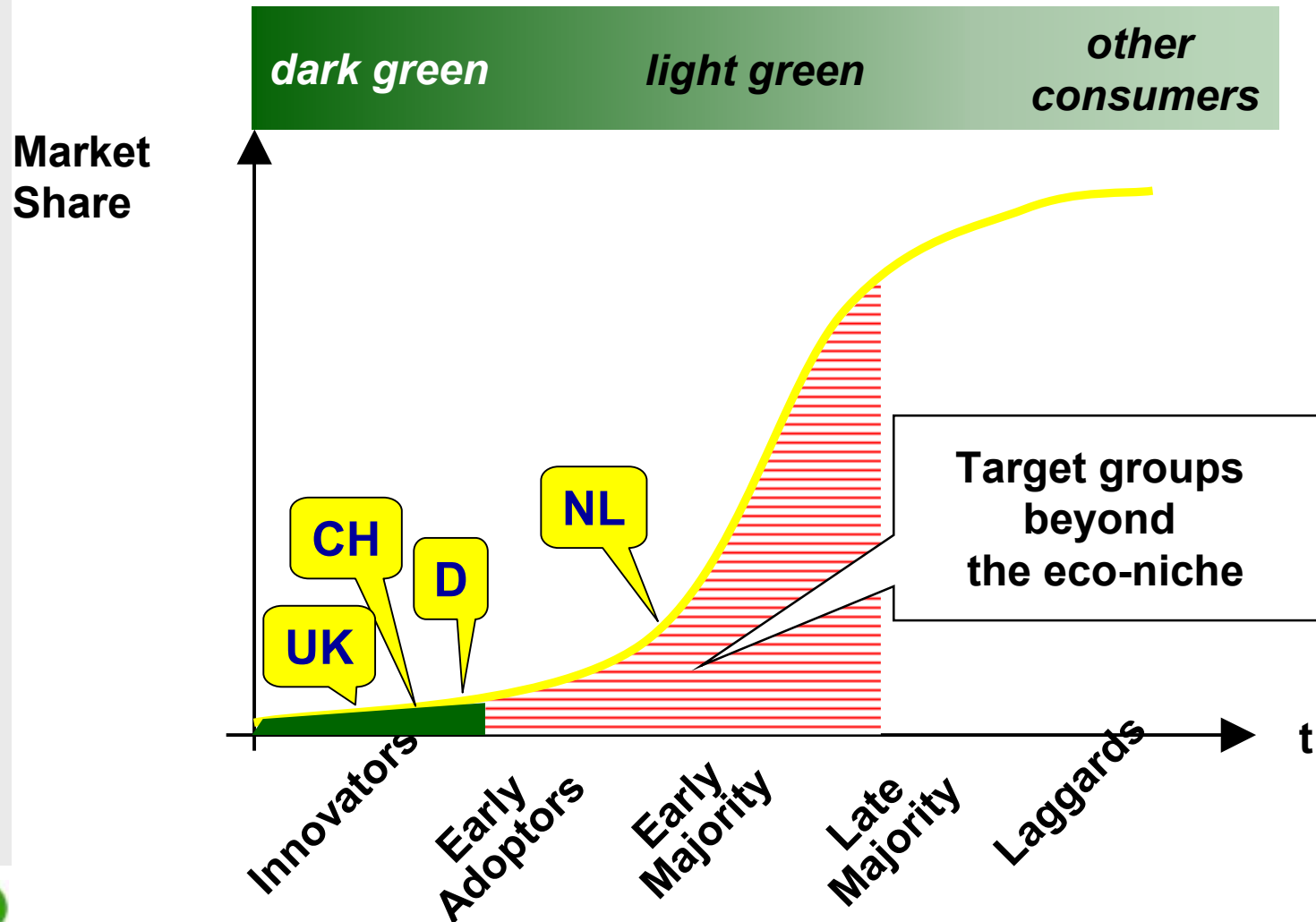
About 1.2 million European customers buy green electricity



Conclusions First: Driving Forces for International Green Power Markets



From niche to mass market: Where are we today?



B2B: Corporate customers and public authorities play an important role in growing the green power market

Thames Water

EMI Music

BT Telecom

The Body Shop

Swedish Railways

Weleda

Sony

Credit Suisse

Deutsche Post

Ministries of Foreign and Economic Affairs, the Netherlands

...and many others...

**Environmental
Management
System (ISO 14001)**

**Environmental
orientation of CEO in
smaller businesses**

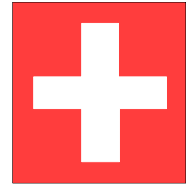
**Government
incentives making
green power
competitive**

European Green Power Markets (1): Germany



- continued and even increased government support for renewables (EEG, removal of 350 MW cap for PV support)
- some uncertainty regarding upcoming elections (Sept 22, 2002)
- environmental pressure increased, particularly following floods in Eastern Germany in summer 2002
- major players focussing on national and international M&A rather than retail marketing, but also giving strong verbal commitments to renewables
- successful expansion of some of the green power pure plays (e.g. Lichtblick/Deutsche Post)

European Green Power Markets (2): Switzerland

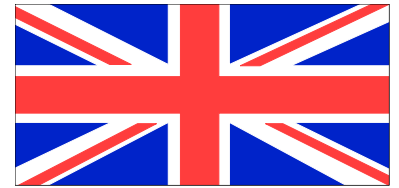


- Market launch of low-impact hydropower products
- Market liberalization legislation turned down in referendum (Sept 22, 2002)
- Draft law included support elements for green power (disclosure, free grid access)
- Slow but steady increase in customer numbers
- National exposition (Expo.02) buying 100% naturmade star certified green power

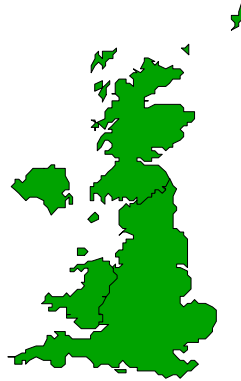
EXPO.02
Schweizerische Landesausstellung
15.05. > 20.10.2002



European Green Power Markets (3): United Kingdom




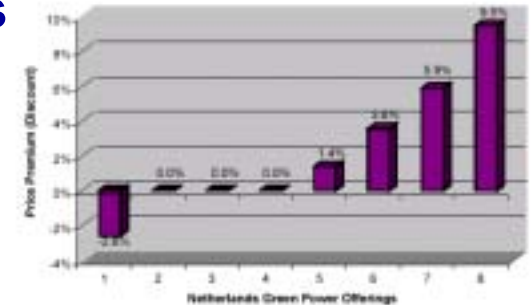
- Introduction of Renewables Obligation with aggressive target for renewables (10 % by 2010)...
- ...leads to several plans for offshore wind farms
- Launch of new green power products by existing utilities in cooperation with NGO
- Continued M&A activity (RWE/Innogy, E.On/PowerGen)
- Still more B2B focus than B2C
- Overhaul of Future Energy accreditation scheme to reflect changing framework



European Green Power Markets (4): The Netherlands



- **Stable Tax Exemption Policy, leading to low premiums** 
- **Continued Marketing Efforts of Utilities**
- **Regulator closing Loopholes, such as Tax Incentives for Imports of Existing Hydropower**
- **Further Expansion of Green Power Sales (13 % market share), whereas New Capacity has a hard time keeping up the pace -> plans for offshore wind**
- **Probably the most advanced on the way from niche to mass market**



A combination of supportive factors leads to high green power market share

	Germany	UK	Switzerland	Netherlands
Policy Incentives	++	+	–	++
Aggressive Marketing	+/-	–	+/-	++
Certification	+	+/-	+	+/-
Market Liberalization	++	++	–	+
Consumer Awareness	+/-	–	++	++
Green Power Market Share	Moderate	Moderate	Moderate	High

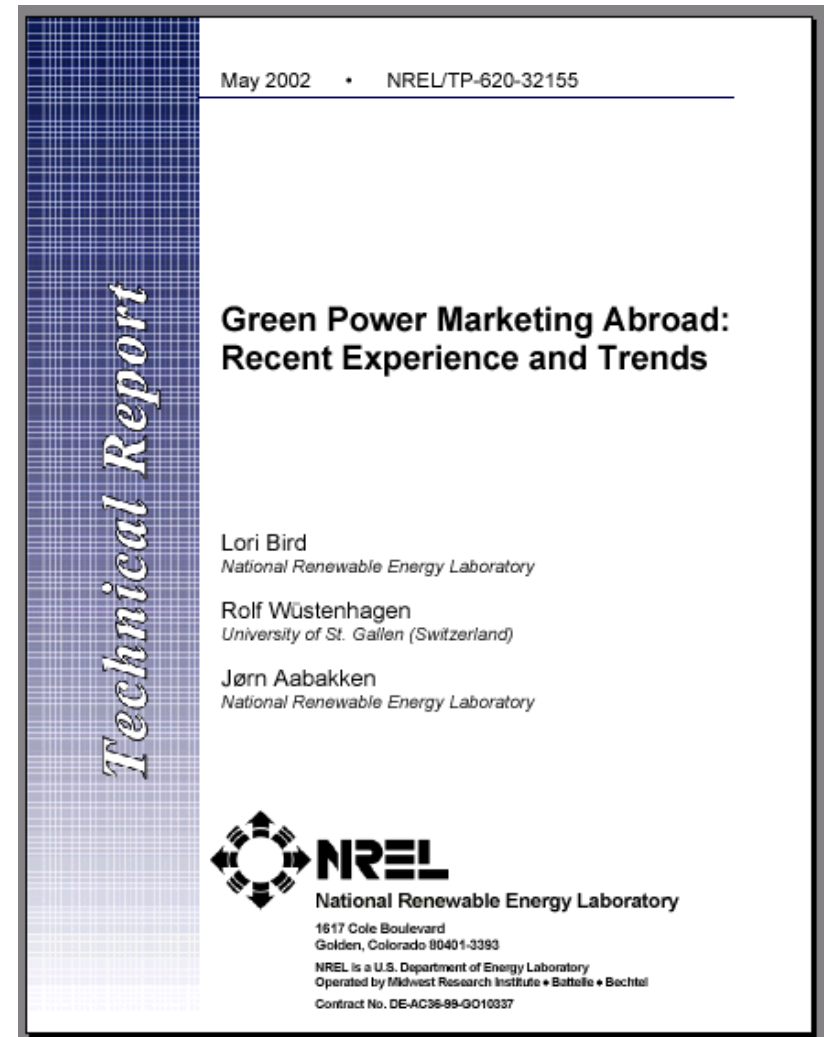
Conclusions

- **Market penetration rates beyond 10 % are achievable if market conditions are favourable to green power (NL). However, most markets face lower market share so far.**
- **Green Power still a very important differentiator when it comes to buying electricity, but general involvement of retail customers regarding electricity lower than anticipated**
- **Green Power Marketing as an energy policy tool more relevant in markets without strong government support for renewables**
- **Creating new renewable generation capacity needs to track increases in green power sales.**
- **Basic sustainability fundamentals are very much intact and probably getting ever stronger.**

Further reading...



ISBN 3-7281-2777-9
www.vdf.ethz.ch/info/2777.html
(in German)



NREL discussion paper
(in English)
www.nrel.gov/docs/fy02osti/32155.pdf